

INFORMATION SHEET

CHEMURGIC AGRICULTURAL CHEMICALS, INC.
GROUNDWATER TREATMENT SYSTEM
ORDER NO. R5-2006-XXXX
STANISLAUS COUNTY

Chemurgic Agricultural Chemicals, Inc. owns and operates a fertilizer formulating and pesticide retail facility in an agricultural area approximately five miles west of Turlock at 3106 S. Faith Home Road, in Stanislaus County. Between 1999 and 2005, the Discharger had been operating a groundwater extraction and treatment system to remove benzene hexachloride and chlorobenzene constituents. As permitted by Waste Discharge Requirements, the treated effluent was discharged to an infiltration trench within the capture zone of the extraction wells. Planned site improvements conflicted with the location of an extraction well, monitoring well, and the infiltration trench, and in April 2005, Chemurgic ceased discharging. By May 2005, Chemurgic destroyed and relocated one extraction well and the proximate monitoring well, removed the original infiltration gallery, and installed a new infiltration trench. In August 2005, Chemurgic conducted a capture zone analysis verifying that the new infiltration trench is within the capture zone of the extraction wells. These Waste Discharge Requirements will permit Chemurgic to resume groundwater treatment and discharge from the relocated system components.

The groundwater treatment system is a part of the final phase of an integrated cleanup plan for contaminated soil and groundwater. The groundwater cleanup system consists of two extraction wells (EW-1 and EW-2A) to remove water from the shallow aquifer at the location of highest known chemical concentrations, an activated carbon adsorption treatment plant to remove organic chemicals from the groundwater, and an infiltration trench to return the treated groundwater to the same shallow aquifer from which it was extracted. The infiltration trench consists of 60 feet of perforated pipeline buried approximately three feet below grade. All elements of the groundwater extraction and treatment system are within the confines of the Chemurgic property. The design operating capacity of the system is 10 gallons per minute.

Turlock Irrigation District operates a dewatering well (TID-7), located about one-half mile west and downgradient of the Chemurgic facility. This well has contained BHC isomers and chlorobenzene compounds since 1985. These constituent concentrations have been declining, and in December 2005, TID-7 contained lindane at 1.8 µg/l, a-BHC at 0.97 µg/l, b-BHC at 0.67 µg/l, and d-BHC at 0.5 µg/l. TID-7 has not contained chlorobenzene compounds since October 1994. DDT and its metabolites had not been detected between 1994 and 2001 and monitoring was discontinued in 2001. TID-7 discharges at about 1,000 gallons per minute most of the year, discharging to a drainage canal (TID Lateral 5) that eventually drains into the San Joaquin River.

The presence of pesticides and their breakdown products in the groundwater poses a threat to existing and potential beneficial uses of the groundwater. Existing groundwater treatment technology of carbon adsorption is capable of dependably removing these constituents to

CHEMURGIC AGRICULTURAL CHEMICALS, INC.
GROUNDWATER TREATMENT SYSTEM
INFORMATION SHEET, ORDER NO. R5-2006-XXXX
STANISLAUS COUNTY

-2-

concentrations which are generally non-detectable. The operating history of Chemurgic's treatment system shows that the efficiency of the lead carbon vessel can drop from 91% to 25% within a month, resulting in a BHC discharge of 0.3 µg/l. This Order requires the lead carbon adsorption vessel to be replaced when its operating efficiency drops to less than or equal to 94% or when any BHC isomer concentration in the effluent is greater than or equal to 0.35 µg/l and sets the effluent limit for BHC at 0.5 µg/l. This Order also sets the daily maximum effluent limit at two times the practical quantitation limit for chlorobenzene. The daily maximum concentration for any BHC isomer is equal to the 30-day average.

AST: 17 Feb 2006